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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Donna R. Searcy, Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Re: ET Docket No. 92-9

Dear Ms. Searcy:

Please find enclosed an original plus four copies of our comments on the above captioned matter. Copies also will be delivered to the Commissioners.

Should you have any questions, please feel free to contact me at (609) 645-4771.

Sincerely,

Richard M. Stokes, Esquire
Manager Government Affairs

rms:jw

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BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the matter of	)	
	)	ET Docket No. 92-9
Redevelopment of Spectrum to	)	
Encourage Innovation in the	)	
Use of New Telecommunications	)	
Technologies	)	

To: The Commission

Comments
of
Atlantic City Electric Company

Atlantic City Electric Company ("The Company") pursuant to Section 1.415 of the Federal Communications Commission Rules, hereby submits its comments in response to the Notice of Proposed Rule Making ("NPRM"), 7 FCC Rcd 1542, FCC 92-20, released February 7, 1992, in the above captioned matter.

I. Introduction

1. The Company is the principal subsidiary of Atlantic Energy, Inc., a public utility holding company. The Company is engaged in the generation, transmission, distribution, and sale of electric energy in the southern part of New Jersey. Our service territory is bound by the Atlantic ocean in the east, the Delaware Bay in the south, and the Delaware River in the west. The Company shares a common service territory border in the north with Jersey Central Power and Light and Public Service Electric and Gas. The Company was organized under the laws of New Jersey on April 28, 1924, by merger and consolidation of several utility companies. The Company also delivers process steam, water, and by-product generated by back

pressure turbines to E. I. duPont de Nemours & Company, Inc.

2. The Company owns and operates its own generation facilities. However, significant generation sources are jointly owned with other utilities. The Company is a co-owner of three nuclear generating stations located in New Jersey and Pennsylvania and two coal generating stations located in Pennsylvania. The Company also has agreements to purchase capacity and energy from non-utility sources in New Jersey and Pennsylvania.

3. The Company is a member of PJM, an integrated power pool, which coordinates the bulk power supply to eleven member utilities in Pennsylvania, New Jersey, Delaware, Maryland, Virginia and the District of Columbia. The Company is also interconnected with other major utilities in the northeastern United States. The Company is a party to the Mid-Atlantic Area Coordination Agreement, which provides for coordinated planning of generation and transmission facilities by the companies included in PJM.

4. The Company operates a microwave communication system licensed in the $2GH_z$ frequency band. The system is part of the Company's telecommunication project that was completed in 1991. The microwave portion of the project cost the Company $8.3 million. The microwave system consists of nineteen (19) transmission locations and covers the Company's 2,700 square mile service territory. Eighteen (18) of these locations are licensed in the $2GH_z$ frequency band. The Company's microwave

communication system is an indispensable part of its 800 MH_z simulcast trunking system used in voice communication. This $6 million simulcast trunking mobil radio system, the other major component of the telecommunications project, is dependent upon microwave as a vital link in its operation.

5. Additionally, the microwave communication system is used to remotely control and monitor electrical transmission lines and generating units; operate the Company's direct load control program (an energy efficiency program in which over 30,000 air conditioners and water heaters are remotely controlled by FM radio signal); and for voice and data transmission between the Company's facilities. The Company's mobile radio system depends on the microwave system to communicate with crews in the field under both normal and emergency conditions.

6. The $2GH_z$ frequency was chosen by the Company in order to meet high reliability standards and because of the critical public functions of the Company. The $2GH_z$ provides important propagation characteristics necessary in communicating emergent and non-emergent functions. Of great importance, the $2GH_z$ frequency is less affected by severe weather conditions experienced in Southern New Jersey (due to its peninsula location) and employs less sites that may be susceptible to reliability problems.

7. The FCC's NPRM proposes to reallocate 220 MHZ of the $2GH_z$ band currently used for private and common carrier microwave operations. The

specific frequencies proposed to be reallocated are the 1850-1990 MHz, 2110-2150 MHz and the 2160-2200 MHz bands. These frequencies will be re-licensed to operators of an emerging, yet unknown, telecommunications technologies. The FCC is proposing to make all fixed microwave bands above 3GH$_z$ available for re-accommodation of the 2GH$_z$ users. However, the technical rules and coordination procedures currently applicable to each of the higher frequency bands will continue to apply.

8. As part of the NPRM is the stated policy of the FCC ("Commission") to minimize the disruption of the operations of existing operations. The Commission proposes to accomplish this policy through a negotiated transition period. The Commission's proposed transition plan consists of three parts:

(1) allow existing facilities to remain co-primary with the facilities of new services for a fixed time, such as 10 or 15 years;

(2) allow existing facilities to continue to operate on their currently assigned frequencies on a secondary basis after the end of the transition period; and

(3) permit state and local governments fixed microwave facilities to continue to operate on a primary basis indefinitely.

New microwave facilities, expansion of existing facilities and major modifications of existing facilities in the 2GH$_z$ band will only be permitted on a secondary basis.

II. The 1850-2200 MHz Band should not be reallocated for the creation of a Spectrum Reserve.

9. Atlantic City Electric Company opposes a reallocation of spectrum in the 1850-2200 MHz band for the creation of a spectrum reserve for development of emerging technologies. If adopted, the Commission's proposal would require the Company to replace its microwave system to make spectrum room for a new technology system currently unknown and untried. Loss of the $2GH_z$ frequency would require the Company to complete a re-engineering of its backbone communication system and eliminate normal use of the Company's mobile radio system during the cut over period to the new communication system. Besides re-engineering requirements, the Company may be required to acquire new communication equipment, tower sites and other incidental services if the Company is forced to relocate. We estimate our cost to relocate to a possible $6GH_z$ frequency at a cost of more than $2.2 million. This relocation cost in our view represents no actual benefit to our customers, employees, or shareholders. In our view, the NPRM does not adequately review the impact that reallocation of the spectrum would have on the existing facilities of utilities and even whether adequate spectrum exists to relocate the existing facilities.

10. Atlantic City Electric Company constructed its present microwave system to increase the reliability of its communication system (especially during storm conditions). In our review, leased services of equal quality, capacity and/or reliability cannot be obtained at most power plant and substation locations in the United States. The primary purpose of an electric utility's communication system is to control and protect

the power grid. The Company interfaces with numerous other utilities on a instantaneous basis in order to transmit electricity. We are tied to numerous other plants and facilities in the northeast. This coordinated system of electrical services cannot be effectively accomplished with leased communication services or fiber optic systems which are dependent upon power line structures, such as poles or towers. This is especially true during natural disasters. When Hurricane Hugo struck the Carolinas in 1989, South Carolina Electric and Gas Company experienced the following: over 400 transmission structures were destroyed, 5,000 distribution poles were destroyed, and 625 miles of transmission and distribution spans destroyed. No transmission lines existed from 30 miles south of Columbia to Charleston (a distance of 100 miles). 115,000 customers were without power in the central area of the state and 135,000 customers were without power in the low country. No microwave towers were destroyed. In fact damage was limited to antennas blown out of alignment and only one antenna destroyed, leading to a quickly restored, fully operational system. (A presentation by Thomas W. Mikkelsen, Manager System Communications, South Carolina Electric and Gas Company, June 16, 1990, to the Utilities Telecommunications Council Annual Meeting.) Consequently, when these structures fail, so do the communications systems which control, protect and facilitate service restoration.

III. The Commission's selection criteria is flawed.

11. It is our opinion that one essential criterion in the selection of spectrum for emerging telecommunications technology must be the impact such a selection would have on the life, safety, comfort, cost or welfare

of the public. We fail to see how the Commission adequately assesses the impact the reallocation of spectrum would have on the public for technologies that have yet to prove themselves. We recognize the Commission's efforts to minimize the cost and disruption of service to consumers. But we submit that a special category should be included in this case because of the basic services a reallocation of this spectrum would jeopardize.

12. The NPRM further assumes that only non-governmental spectrum should be considered under the arguments of coordination and timeliness. We believe that important consideration of governmental bands should, however, be considered for either the emerging technologies or for relocating the existing facilities.

We support the concept of establishing a frequency reserve in the 1.71 - 1.85 GH_z band. Even though this band is regulated by National Telecommunication Information Administration (NTIA), it has all the necessary characteristics to support the new technologies and is very sparsely populated with users. Recent history also indicates that government spectrum may be considered for allocation. In the early 1970's, an additional 115 MH_z of spectrum was needed to accommodate technologies such as cellular telephone and trunking systems. It was also recognized that an additional 45 MH_z of reserve spectrum was needed for emerging technologies. The end result of the Commission's study was the reallocation of a portion of the government band and TV channels 70 through 83. If government agencies could cooperate in the 1970's it seems

appropriate that they could do so again in the 1990's.

13. If the Commission is unable to consider placing the spectrum reserve in the 1.71 - 1.85 GH_z spectrum band, we recommend that it be considered in the alternative as the primary relocation band for current 2 GH_z licensees. This recommendation is based upon the risks and costs associated with relocation of current licensees. Moving a current licensee to this portion of the government band requires relatively minor technical changes to the current systems. Generally, it would only require change out of the filters, circulators, and feed horns used in current systems. No new towers or communications shelters would be needed for the company system. The frequencies of existing transmitters and receivers could be changed. No module or transmission line replacement would be required. The public which is dependent upon the national infrastructure services provided by current licensees would face the lowest risk and cost of any relocation alternative.

14. The study (Creating New Technology Bands For Emerging Telecommunications Technology) concentrated on the 1-3 GH_z spectrum assumed that the use of this specific spectrum in other countries was a desirable objective. The Commission, however, rejected the argument that there was no specific utility in making use of spectrum which was already clearing due to common carrier discontinuance of microwave operations. The Commission's assumption that identical international spectrum is required in order to remain globally competitive is without basis because there will still be a need for manufacturing changes to compensate for world

differences in electrical supply and safety standards. In fact, this approach limited itself to a preconceived notion that the spectrum used by other countries was the best candidate even though in the United States, basic service companies and government units would be forced to undertake relocation of their vital communications networks. Priority must be given to selection of spectrum which is clearing naturally or which is already lightly used.

15. We are also concerned with the lack of review by the Commission concerning the need for these "emerging technologies". There has been virtually no discussion on what benefits the emerging technologies would have on the public as they force basic services to vacate their present frequencies. We believe that the Commission has shown what amounts to a total disregard for the services provided by the existing facilities of the $2GH_z$ as well as the impact a relocation would create in deference to a yet to be defined emerging technology. We would urge the Commission to freely review the merits of the emerging technologies and the need to relocate the existing facilities. In addition, we would suggest that the proposal be modified to allow for changes should the promises of emerging technologies not be forthcoming. A three year review period would be appropriate in considering these changes. As the NPRM points out, frequencies are a finite resource and greater demands are being made in the use of the frequencies. The Commission should have a model on what are efficient public uses of these frequencies and who may qualify in advance of any new services or technologies.

IV. Sharing of frequency on a co-primary basis will result in signal interference.

16. Our initial review suggests that large scale attempts to use new technologies on a co-primary basis with fixed microwave will result in interference with the fixed microwave system when the new technology applications experience large volume use. Maintenance for the fixed microwave user will be dramatically complicated by short term random interference whose source will be almost impossible to trace. Current coordination procedures are effective between fixed services but not in a mixed situation with fixed service along with mobile/pedestrian radios in proliferation. Our engineering reviews suggest that existing signal coordination processes will not be effective when dealing with fixed as well as mobile/pedestrian applications. Therefore, we recommend that new technology licenses be granted on a secondary basis only, until sufficient spectrum is naturally cleared to allow primary licensing to be granted. Under this revised transition program, new operators would be able, at any time, to negotiate with existing primary users to obtain their licensed spectrum on a secondary basis. These negotiations would accommodate fully any special economic or operational considerations and allow the competitive marketplace to govern the speed that spectrum is freed. We recommend that there be no time period established for primary licensees to leave the spectrum. Thus, all use of existing licensed frequencies will be the result of this negotiation process.

V. Allocating Specific Blocks of Frequencies would create an impractical communication system.

17. We strongly oppose the suggestion to make specific blocks of frequencies available. Attached as Figure A is "Atlantic Electric Company Frequency Plan" as an illustration of how the microwave frequencies that transmit and receive are paired. If the Commission was to move the first 50 MH_z block of the 1.85 - 1.99 GH_z spectrum, Atlantic Electric would lose all transmitter frequencies between 1.85 - 1.90 GH_z. At least one end of each path would be adversely affected. Functionally, if Atlantic Electric would change all of the affected transmitters, a 6 GH_z transmission line and dish would have to be added to each tower. The end result would be a 2 GH_z and 6 GH_z antenna system residing on each tower. This is not practical. An approach of this type would be even more disruptive and costly than relocating to 6 GH_z in one coordinated effort.

VI. Utility facilities should be exempted from any mandatory transition period.

18. The NOPR proposes a transition period that would, except for state and local government facilities, allow existing facilities to remain co-primary for a fixed period of time and assign the existing facilities a secondary basis after the end of the transition period.

19. The NPRM exempts state and local government facilities from the transition period and allows the facilities to remain co-primary indefinitely. The reasoning for this exemption is based on "special economic and operational considerations in relocating their 2 GH_z fixed

microwave operations to higher frequencies or alternative media". The NPRM at page 12, paragraph 25, states further: "We are particularly sensitive to the need to avoid any disruption of police, fire and other public safety communications." If the Commission's reason for the grandfathering of state and local government is "to avoid disruption of police, fire, and other public safety communications," then the disruption of a utility that provides power to these life safety entities should similarly be considered. The same common carrier services and other alternative technologies are available to state and local governments that are available to electric utilities. It makes little sense to single out public safety and government units without establishing criteria for the type of function to be exempted. Under the proposed process it is very likely that municipal electricity utilities would be exempt while forcing the adjacent investor-owned public utility to be relocated with its associated risks and hardships.

We submit that this exemption implies that the flexible negotiation approach and extended transition period are not adequate to compensate a licensee for the loss of their currently licensed stations. We believe that this exemption is indicative of its faulty reasoning. We maintain that the NPRM cannot be made adequate to hold current licensees harmless. Based upon the inadequacy of the proposed negotiation and transition processes we believe that the frequency clearing process is fatally flawed and that the proposed spectrum reserve should be withdrawn from further consideration.

VII. Reimbursement for Relocating to Different Frequencies.

20. Atlantic City Electric Company supports a full and adequate reimbursement of costs realized because of the relocation. We believe that it is incumbent upon the future user, the emerging technology applicator, to make whole the present user for any costs associated with the relocation. We stated earlier that utility facilities should be exempted from any mandatory transition period in order to allow for a full arms length negotiation to proceed. We believe that this exemption is necessary in order to provide an honest negotiation of the value of the frequencies. Furthermore, some of the costs that must be provided for include costs (legal, administrative, etc.) associated with the re-engineering, construction costs for new facilities, equipment costs, auxiliary regulatory costs, and costs associated with maintaining the reliability of the Communication System. We also agree with the need to protect against speculative licensing as a way of providing for a fair price of the frequency.

The Company also recommends a period greater than ten years be granted in order to amortize equipment that is no longer useful because of the relocation. We believe that any type of amortization be reflective of current depreciation schedules and revolve around replacement of services as opposed to depreciation of the equipment. Atlantic Electric is presently on a 28 year depreciation schedule for our telecommunication equipment. Ten years would not adequately address our needs and would unwittingly increase our financial burdens of relocation. Also, any value we presently have on our equipment may substantially decrease because of

the lack of $2GH_z$ users and manufacturers of similar or like equipment.

VIII. Conclusion

21. Atlantic City Electric Company recognizes the difficulties inherent in making a decision to reallocate spectrum. As technology marches forward an ever-increasing need for spectrum will continue. However, we cannot support progress at the irresponsible expense of current license holders. We believe that the principles of law and fact considered today will be important factors for future decisions in the uses of spectrum. We would encourage the Commission to weigh all the factors in order to reach an honest and fair consideration of the proposal. We submit, however, that our customers and shareholders should not be subjected to this cost and service disruption without more study and better established need.

In our view the Commission has not adequately assessed the impact a reallocation would have on our customers or other current licensees. We live in an environment in Southern New Jersey with many heavy storms, much humidity, and changing weather conditions. The ability to provide electricity to over 1.2 million people is critical to their safety and health and general economic well-being. Faulty or ineffective communication systems could limit our ability to provide such electrical service. This is recognized by the Commission in the exception granted to state and local government facilities, many of which are dependent upon our services. We submit that the impact a forced relocation would have on our customers could be significant and involve vital life measures for our

customers. Yet the Commission has arbitrarily decided that an easily adaptable frequency, the 1.71 - 1.85 frequency GH_z band, is unavailable for even consideration. Due to these factors, we believe that the Commission has not adequately analyzed the impact of reallocation versus the need for an evolving, yet unknown, emerging technology in this frequency. In short the proposal under-estimates the value of current services while over-estimating the potential for a future technology.

In our review of the proposal, we believe that the transition plan fails to adequately allow for a fair and equitable reallocation of the frequency. By allocating a fixed time period, the proposal would arbitrarily require abandonment of the spectrum without any full consideration of use. Also, the fixed time period would establish a false negotiation of price for the frequency. We submit that by letting market forces determine both the price and time period for acquisition, the Commission would be establishing a more practical result then terminating negotiations at the end of the specific time period. We also believe that the proposal should include a three year review period to insure the progress of the emerging technologies and possible changes to the reallocation plan.

We would add that the proposal has already exacted a toll on the current users of the $2GH_z$. Vendors are currently considering or ceasing to manufacture new equipment, product lines and expansion of features for users of the spectrum. We would suggest a careful analysis of this impact in order to limit future harm to current users of spectrum when

reallocation is considered.

Wherefore, Atlantic City Electric Company respectfully requests the Commission to consider these comments in acting on the subject notice of proposed rule making.

Respectfully submitted

Atlantic City Electric Company

By: _____

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FIGURE A

ATLANTIC ELECTRIC COMPANY
FREQUENCY PLAN